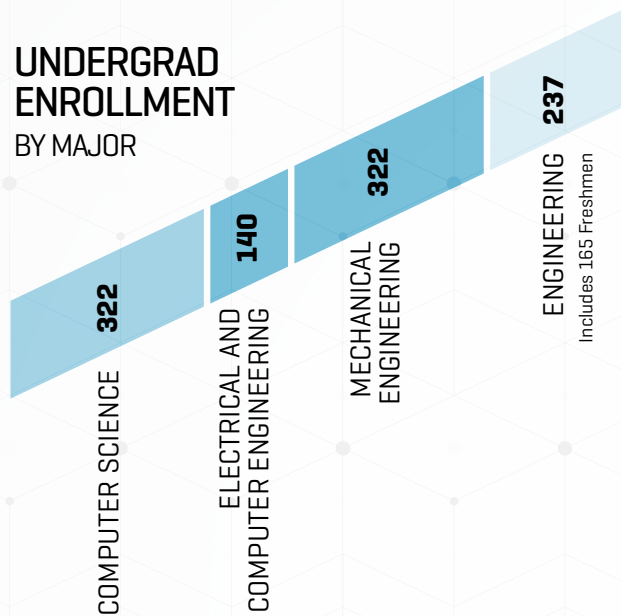


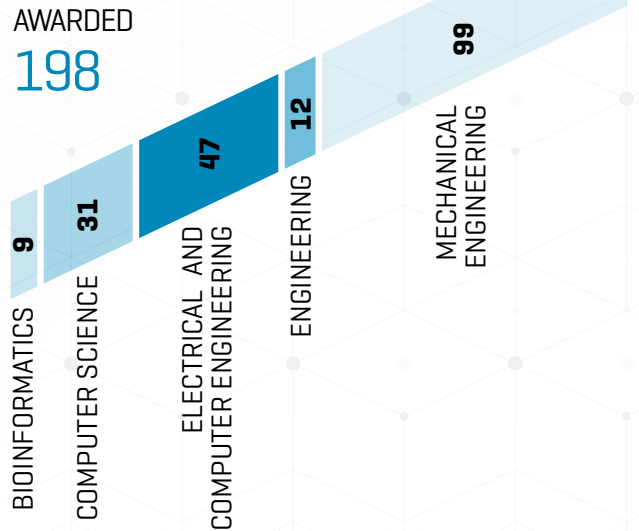
ANNUAL REPORT

Fiscal Year 2017

UNDERGRAD ENROLLMENT BY MAJOR



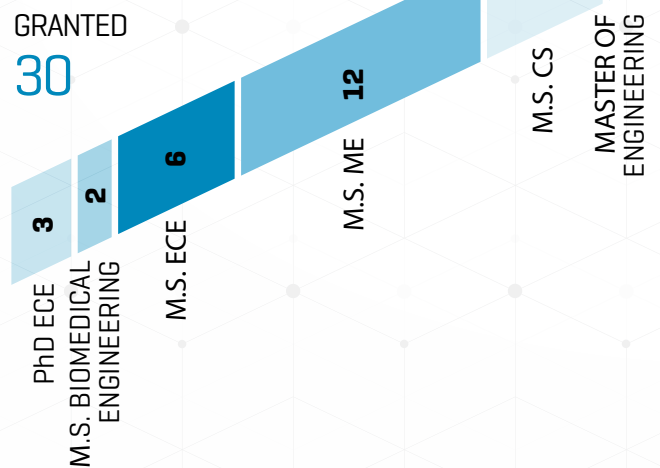
UNDERGRAD DEGREES AWARDED



UNDERGRAD SNAPSHOT



GRADUATE DEGREES GRANTED



TOTAL ENROLLMENT | 1123

UNDERGRAD | 1016 | GRADUATE | 107

FEMALE

21%

MINORITY

27%

AVERAGE CLASS SIZE

26

2017–2018 FACULTY

Department of Mechanical Engineering

Dr. Kenneth Van Treuren
Interim Department Chair, Associate Dean of Research and Faculty Development, and Professor

Mr. Joseph Donndelinger
Clinical Associate Professor

Dr. Brian Garner
Associate Professor

Mr. Stanton Greer
Lecturer

Dr. David Jack
Associate Professor

Dr. William Jordan
Professor

Dr. Benjamin S. Kelley
Professor

Dr. Jill Klentzman
Lecturer

Dr. Sunghwan Lee
Assistant Professor

Dr. Yue (Stanley) Ling
Assistant Professor

Dr. Stephen T. McClain
Associate Professor

Dr. Byron Newberry
Professor

Dr. Jonathan Rylander
Assistant Professor

Dr. Carolyn Skurla
Associate Professor

Dr. Douglas E. Smith
Associate Professor and Graduate Program Director

Dr. Anne Spence
Clinical Associate Professor

Dr. Elon Terrell
Lecturer

Dr. Lesley Wright
Associate Professor

Dr. Alex Yokochi
Professor

Department of Computer Science

Dr. Greg Speegle
Professor and Department Chair

Mr. Matthew Aars
Senior Lecturer

Mr. Michael Aars
Senior Lecturer

Dr. Erich Baker
Professor

Dr. Bill Booth
Senior Lecturer

Dr. Tomas Černý
Assistant Professor

Dr. Young-Rae Cho
Associate Professor

Dr. Jeff Donahoo
Professor

Dr. Matthew Fendt
Lecturer

Ms. Cindy Fry
Senior Lecturer

Dr. Greg Hamerly
Associate Professor

Dr. David Lin
Associate Professor

Dr. Pete Maurer
Professor

Dr. G. Michael Poor
Assistant Professor

Dr. Bill Poucher
Professor

Dr. Eunjee Song
Associate Professor and Graduate Program Director

Department of Electrical and Computer Engineering

Dr. Kwang Y. Lee
Professor and Department Chair

Dr. Charles Baylis
Associate Professor

Dr. Enrique Blair
Assistant Professor

Dr. Liang Dong
Associate Professor

Dr. W. Mack Grady
Professor

Dr. Ian Gravagne
Associate Professor and Graduate Program Director

Dr. Jonathan Hu
Associate Professor

Dr. Randall Jean
Professor

Dr. Seung Kim
Associate Professor

Dr. Scott Koziol
Assistant Professor

Dr. Yang Li
Associate Professor

Dr. Robert J. Marks II
Distinguished Professor

Mr. John Miller
Senior Lecturer and Assistant Chair

Dr. Linda J. Olafsen
Associate Professor

Mr. Steven Potter
Lecturer

Dr. Keith Evan Schubert
Professor

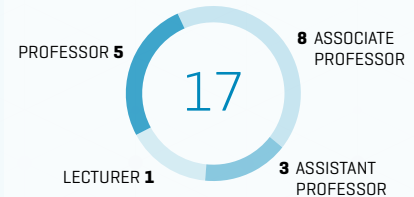
Mr. Brian Thomas
Senior Lecturer and Faculty Steward of Teal Residential College

Dr. Mike Thompson
Professor and Associate Dean for Undergraduate Programs

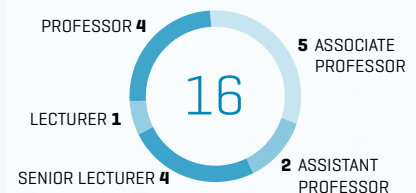
Dr. Annette von Jouanne
Professor

FACULTY STATS

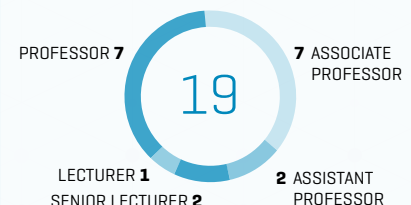
Mechanical Engineering



Computer Science



Electrical and Computer Engineering



FACULTY AWARDS

Stephen McClain, PhD

Associate Professor of Mechanical Engineering

Dr. Stephen McClain was elected an Associate Fellow of The American Institute of Aeronautics (AIAA) in October 2017.

"The distinguished individuals comprising the Class of 2018 Associate Fellows exemplify extraordinary accomplishments and leadership in the global aerospace community," said Jim Maser, AIAA president. "Each individual has demonstrated a remarkable commitment to furthering the advancement of aerospace science and technology, and each has performed important work that the Institute is proud to recognize. Their dedication, ingenuity and accomplishments serve as an inspiration to current and future aerospace professionals."

David Jack, PhD

Associate Professor of Mechanical Engineering

Dr. Jack was one of 12 Baylor Outstanding Faculty named in fiscal year 2017. He received an Outstanding Scholarship award, which recognizes the best all-around professors based upon teaching capabilities, research achievement, effective committee service, time spent with students, and civic and church involvement. Dr. Jack received a cash award of \$2,500, a citation and recognition at the spring commencement ceremonies.

Kenneth Van Treuren, DPhil

Interim Department Chair for Mechanical Engineering, Associate Dean of Research and Faculty Development, and Professor

Dr. Van Treuren received the Scott Kalmus Award for Sustained Superior Service to the American Society of Mechanical Engineers (ASME) North Texas Section on May 5, 2017. This award was established in 1999 for continuous and outstanding service to the North Texas Section.

Additionally, Dr. Van Treuren earned the ASME International Gas Turbine Institute (IGTI) Outstanding Service Award for outstanding contributions, commitment and service to the Wind Energy Committee.

Jeff Donahoo, PhD

Professor of Computer Science

Dr. Donahoo received the 2017 Mark Measures Distinguished Service Award for distinguished service, directing the

International Collegiate Programming Contest (ICPC) information technology infrastructure since 2001, providing developmental support for global CLI Developers since 2002, creating and directing ICPC News, and serving as the deputy executive director of the Association for Computing Machinery (ACM) and ICPC executive director of the 2017 World Finals.

The Mark Measures Distinguished Service Award is presented annually to a volunteer who has played an instrumental role in the success of the ACM ICPC for fifteen or more years. Dr. Donahoo was presented the award on May 22, 2017.

Benjamin Kelley, PhD

Professor of Mechanical Engineering

Jill Klentzman, PhD

Lecturer of Mechanical Engineering

Jonathan Rylander, PhD

Assistant Professor of Mechanical Engineering

Dr. Kelley, Dr. Klentzman and Dr. Rylander each received the Baylor University Outstanding Professor in Teaching Award in June 2017. Baylor University recognizes faculty members as Outstanding Faculty in the areas of teaching, scholarship and contributions to the academic community each year.

"The awards provide an opportunity to recognize and highlight the excellence in teaching and scholarship of our faculty that impacts not only our students and University but also their respective academic fields, both nationally and internationally," said selection committee chair Trena L. Wilkerson, PhD, professor and graduate program director in curriculum and instruction in the School of Education.

Dennis O'Neal, PhD, PE

Dean, School of Engineering & Computer Science

Dr. Dennis O'Neal earned the Technical Paper Award from The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) in 2016, presented in summer 2017, for his paper, "Characterizing the Performance of Fixed-Airflow Series Fan-Powered Terminal Units Using Mass and Energy Balance Approach."



Benjamin Kelley, PhD (center)



David Jack, PhD



Kenneth Van Treuren, DPhil



Jeff Donahoo, PhD



Benjamin Kelley, PhD



Jill Klentzman, PhD



Jonathan Rylander, PhD



Dennis O'Neal, PhD, PE (right)

RESEARCH INFORMATION

DOLLAR AMOUNT OF TOTAL
RESEARCH AWARDS

\$2.57 Million

TOTAL NUMBER OF RESEARCH
EXPENDITURES

\$2.71 Million

TOTAL NUMBER OF
RESEARCH AWARDS

39

INCREASE IN COMPETITIVE RESEARCH
EXPENDITURES FROM FY2014 TO FY2017

FY2017 **\$2.710 MILLION**

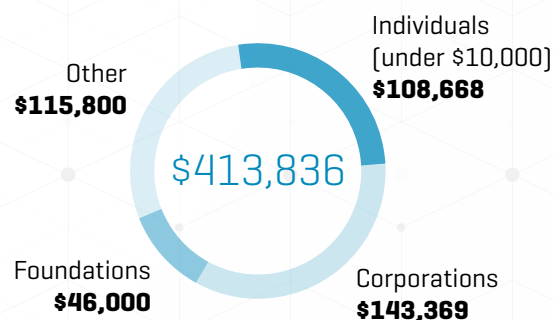
FY2016 **\$1.455 MILLION**

FY2015 **\$1.506 MILLION**

FY2014 **\$1.215 MILLION**

DEVELOPMENT INFORMATION

GIFT BREAKDOWN BY TYPE
FY17 YTD



FY2010–FY2016 AVERAGE TOTAL
AMOUNTS RAISED EACH YEAR

GIFTS **\$715,879**

NEW COMMITMENTS **\$628,113**

PLEDGES **\$227,881**

FY2017 ANNUAL GIVING
[TOTAL DOLLAR AMOUNT]

GIFTS **\$1,117,443**

NEW COMMITMENTS **\$968,576**

PLEDGES **\$14,770**

TOTAL NUMBER
OF DONORS **208**

ECS STUDENT ORGANIZATIONS

2016-2017

AMERICAN SOCIETY OF MECHANICAL ENGINEERING (ASME)

The Baylor Chapter of the American Society of Mechanical Engineers seeks to provide engineering students of a variety of disciplines with professional development and networking skills, exposure to the world of professional engineering, and a forward-focused community for innovative collaboration. Baylor ASME includes a Robotics Design team that competes annually at the ASME Student Professional Development Conference. Baylor ASME's mission of "Setting the Standard" for excellence serves as a guide for its operation and leadership.

ASSOCIATION FOR BIOINFORMATICS AND BIOTECHNOLOGY (ABB)

Association for Bioinformatics and Biotechnology is a student organization dedicated to helping build and foster common interests in Bioinformatics within the major and among like minded students. ABB provides members with a better understanding of Bioinformatics, a network with other students, professors, and professionals in the field, and support for scholarly success. These goals are achieved through monthly meetings, attendance of symposia, and other social activities.

ASSOCIATION FOR COMPUTING MACHINERY (ACM)

The Baylor Student Chapter of ACM was chartered in 1974 and assists members in maintaining a close, regular association with fellow students and faculty who are also interested in computing. In addition, the chapter sponsors the Baylor Programming Team which competes in the ACM Regional and ACM International Collegiate Programming Contests. Periodic meetings provide a combination of social interaction, professional dialogue, public service, and professional development. Membership is open to anyone with an interest in computing.

BAYLOR BIOMEDICAL ENGINEERING SOCIETY (BMES)

The mission of the BMES is to build and support the biomedical engineering community, locally, nationally and internationally, with activities designed to communicate recent advances, discoveries, and inventions; promote education and professional development; and integrate the perspectives of the academic, medical, governmental, and business sectors.

BAYLOR THEME PARK ENGINEERING AND DESIGN (BTPED)

Baylor Theme Park Engineering and Design is a student organization focused on creating a

collaborative environment for all students interested in the theme park industry. The organization is open to all majors in hopes of bringing together both technically innovative and artistically creative minds. In addition to regular creative-thinking challenges, the organization forms student-led teams that compete in the Disney ImagineNations design competition each year. Through monthly meetings and guest speakers, BTPED connects passionate students with each other and to opportunities in the amusement park industry.

BAYLOR UNDERGRADUATE RESEARCH IN SCIENCE & TECHNOLOGY (BURST)

BURST is an undergraduate student organization focusing on providing information and opportunities for students to enhance their undergraduate research experience, hosting lectures to educate students about the principles of research, and increasing the awareness of the importance of undergraduate research for those involved in science, technology, engineering, and math.

BAYLOR AMATEUR RADIO CLUB

The Baylor Amateur Radio Club (BARC) provides educational opportunities for students concerning the scope of amateur radio and radio license acquisition, opportunities for public service during emergency situations and local charitable activities, and an operable amateur radio station for members.

BAYLOR BUV (BASIC UTILITY VEHICLE)

Baylor BUV is a humanitarian organization that provides undergraduate engineering students hands-on experience with design and construction of a Basic Utility Vehicle (BUV) for developing countries and mission activities.

BAYLOR VIRTUAL REALITY CLUB

The Baylor Virtual Reality Club is an organization that aims to provide a place for everyone to experience the wonders of virtual reality and have fun while doing it. While typical club meetings revolve around playing VR games with friends and hosting competitions, the Baylor VR Club also has a development team that works directly with the Baylor Library System and Baylor Film and Digital Media Departments to develop VR applications and media. The club hosts special events such as competitions against Texas A&M's VR club and developer talks from VR development teams.

BEAR BOTS

Bear Bots is a brand new organization that plans to get involved with local robotics competitions in the Waco community. The organization will also serve

to network faculty and students who are passionate about the area of robotics.

CHI SIGMA

Chi Sigma Iota is a professional computer science fraternity that promotes effective leadership skills in the field of computer science. Chi Sigma Iota sponsors service and professional projects for the students. Through stimulating programs and social gatherings, members gain practical experience to enhance their education at Baylor. Membership is open to men and women committed to service in the field of computer science.

COMPUTING FOR COMPASSION (C4C)

Computing for Compassion (C4C) serves compassion-based ministries through the appropriate application of computing solutions. Such solutions seek to magnify the capabilities of such ministries by solving their most frustrating problems. C4C enables students an opportunity to apply their technical skills to such mission work, gaining real-world experience along the way.

ENGINEERS WITH A MISSION (EM)

Engineers with a Mission (EM) is a unique Christian organization that envisions and mobilizes engineering students to serve the people of developing countries with their technical skills through appropriate technology projects and mission-oriented trips abroad. Membership is two-tiered: any engineering major may be a general member, but the technical and spiritual core is made up of the Project Implementation and Testing (PIT) Crew, which utilizes a more selective application.

ETA KAPPA NU

Eta Kappa Nu (HKN) is the national honor society for Electrical and Computer Engineering students. Baylor's group is the Kappa Tau Chapter. Membership is by invitation and is based on a review of the student's high academic record and character. Junior ECE majors in the upper fourth, and senior ECE students in the upper third, of their respective classes are eligible for consideration and election to HKN.

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

The Baylor University Student Branch of the IEEE is affiliated with the Institute of Electrical and Electronics Engineers, Inc., an international organization which is the world's largest technical professional society. Through projects, field trips, and meetings, the student branch fosters the professional growth of its members and promotes a closer

relationship among students, faculty, and the engineering community. Baylor Student Branch membership is open to any student member of IEEE. Student membership in IEEE is open to students studying engineering, computer science, or a related field.

MTT SOCIETY The Baylor University Student Branch Chapter of the IEEE Microwave Theory and Techniques Society (MTT-Society) is a subordinate of the international MTT-Society, which promotes “the advancement of microwave theory and its applications, including RF, microwave, millimeter-wave, and terahertz technologies.” With support of dedicated faculty and sponsors, the Baylor Chapter of the MTT-Society strives to bring microwave lecturers to the Baylor campus to speak at least once a month, and MTT-Society members get the opportunity to meet these lecturers in a small group setting. Baylor Chapter membership is open to any student who is a registered member of the international IEEE and MTT-Society.

NATIONAL SOCIETY OF BLACK ENGINEERS (NSBE) Baylor University's Chapter of the National Society of Black Engineers (NSBE) is available to all students majoring in engineering, science, or applied mathematics. The NSBE mission statement is “to increase the number of culturally responsible Black engineers who excel academically, succeed professionally and positively impact the community.” The objective of the Chapter is to encourage the professional career development of African-American and other ethnic minorities in engineering and other science/technology related fields at Baylor University. Furthermore, the Chapter strives to promote fellowship among minority students in order to increase the number of minority students entering and graduating with a degree in engineering or other related fields.

OSO ESPORTS

Oso eSports is the premiere competitive gaming organization on campus. Regardless of skill level, members come together to compete in a variety of games against other schools and students across the nation, while enjoying the incredible gaming community we have on campus. The group has partnered with a number of collegiate esports organizations to help provide the best gear possible to our members. Sponsored by Nexus Esports, the brand-new esports lounge in Waco, a number of Oso eSports events will be hosted in coming semesters.

PI TAU SIGMA Pi Tau Sigma is an International Mechanical Engineering Honor Society, instituted in order to establish a closer bond of fellowship among its members. Its goal is the mutual benefit of those men and women in the study and profession of Mechanical Engineering (ME). Pi Tau Sigma's core values are integrity, service, and leadership. Membership offers are extended each semester to junior and senior ME majors based on scholarship and character. Baylor's Beta Beta chapter of PTS seeks to provide opportunities to build relationships with other Mechanical Engineers and to learn about different areas of the industry.

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE) INTERNATIONAL SAE International (formerly the Society of Automotive Engineers) has more than 121,000 members—engineers, business executives, educators, and students from more than 97 countries—who share information and exchange ideas for advancing the engineering of mobility systems. SAE is your one-stop resource for standards development, events, and technical information and expertise used in designing, building, maintaining, and operating selfpropelled vehicles for use on land, at sea, in air or space. The Baylor University Collegiate Chapter of SAE International is available to all students at Baylor who share a common interest in aerospace, automobiles, commercial vehicles, or motorsports. The organization provides opportunities to grow as an engineer and a professional through company tours, professional speakers, and student competitions.

SOCIETY OF PLASTIC ENGINEERS (SPE) The Society of Plastics Engineers is a multidisciplinary organization that strives to increase interest in the area of plastics engineering, plastics scientists, and professional careers in the industry. As part of our mission, the Baylor SPE chapter will provide opportunities for students to learn about plastics engineering by inviting experts in the field to Baylor for symposia and organize industrial site visits to companies using plastics. SPE will also organize extra-curricular education sessions with hands-on training with industrial and characterization equipment not available in the standard undergraduate curriculum. As part of our mission statement we will also provide to Baylor students information about career opportunities in the field of plastics engineering.

SOCIETY OF WOMEN ENGINEERS

(SWE) Baylor University's Student Section of the Society of Women Engineers is open to all engineering and computer science students, both male and female. The goals of the section are: to provide education about the challenges facing female engineers; to create a sense of identity and community; to provide resources for women engineers; and to enhance leadership and professional skills. These goals are achieved through mentoring relationships, presentations, field trips, and other activities.

THETA TAU Theta Tau is the oldest, largest and foremost fraternity for engineers. Founded in 1915 by its 19 charter members, the Baylor chapter of Theta Tau is now a fully functional professional fraternity of outstanding men and women. With emphasis on quality and a strong fraternal bond, the Fraternity has chapters only at ABET-accredited schools and limits the number of student members in any one of its chapters across the nation. The mission of Theta Tau is to develop leaders for profession, service and brotherhood.

UPSILON PI EPSILON Upsilon Pi Epsilon is an honorary computer science association that promotes high scholarship and original investigations in the branches of computer science. Membership in the Baylor chapter is composed of individuals whose academic achievements, reputations, and creative abilities deserve recognition. The chapter inducts members twice each year and assists students in their academic pursuits.

WOMEN IN COMPUTER SCIENCE

(WiCS) Baylor's Women in Computer Science (WiCS) is available to all female majors in the Department of Computer Science as well as to other females in STEM fields at Baylor. WiCS is designed to promote community among female computer science majors through discussion-based reading groups in addition to Q&A sessions with professional women in tech industries. In addition to developing community, WiCS is designed to limit attrition among females in the major. Through intentional peer mentorships, one to two upper-division females will meet weekly with two to three students to talk about courses, challenges, perseverance, and internship/job opportunities within Computer Science.